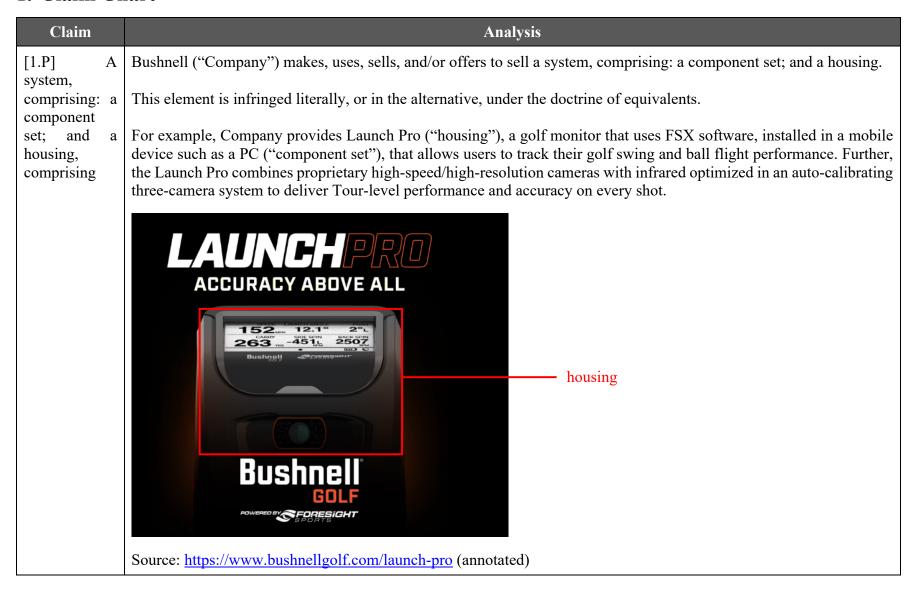
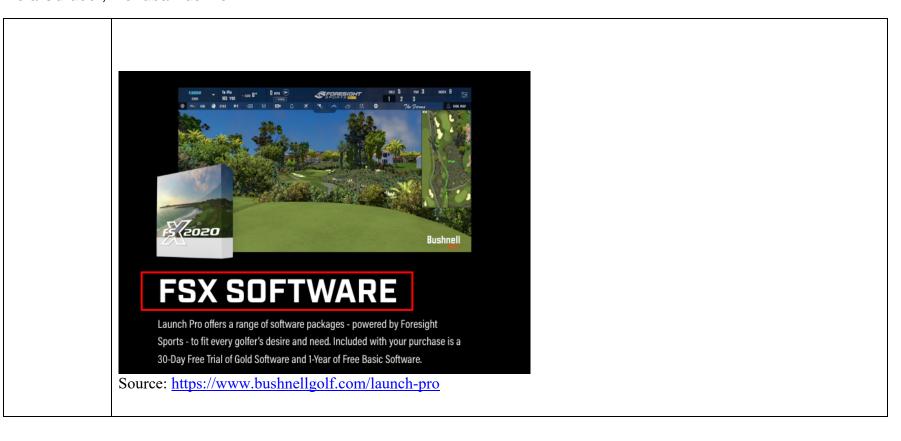
> U.S. Patent No. US 9,384,671 v. Bushnell Claim 1 Exemplary

1. Claim Chart





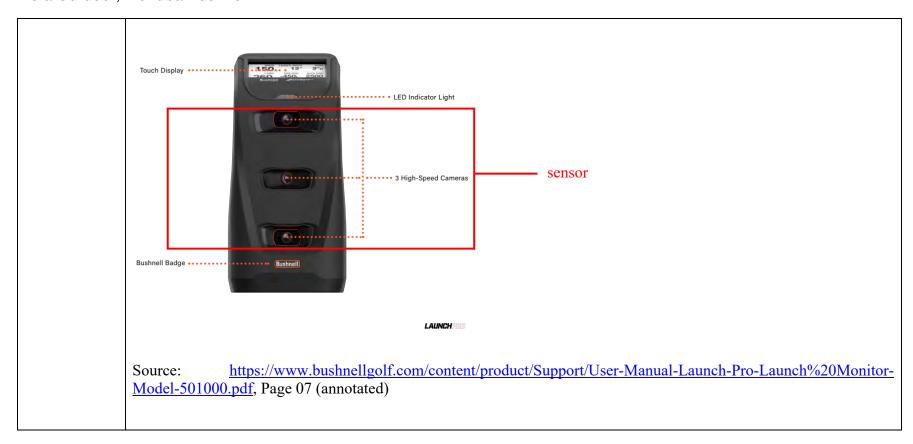
of a user") performed by the player or user.

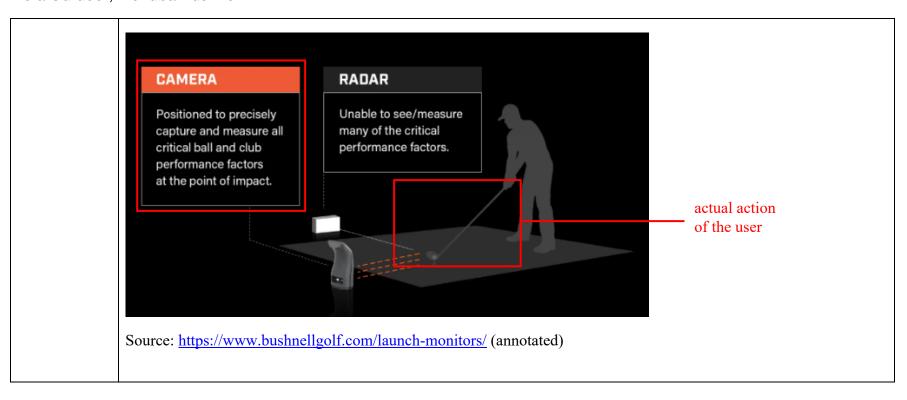
captures an

actual action of a user, and

	ACCURACY ABOVE ALL	
	Your pursuit of longer drives, more accurate carries and lower scores requires knowing the critical data points of your swing. Using a personal launch monitor will give you these data points, however, not all launch monitors are created equal.	
	Unlike radar-based systems that set up behind the golfer and rely on algorithms to guess what happened at impact, the Launch Pro combines proprietary high speed/high resolution cameras with infrared which has been optimized in an auto calibrating three-camera system to deliver Tour-level performance and accuracy on every shot. We literally see impact like never before and this allows you to trust your swing when it matters most.	
	Source: https://www.bushnellgolf.com/products/launch-monitors/launch-pro/ Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall	
	supplement these contentions pursuant to production of such source code by the Company.	
[1.1] a sensor that, at least	Company provides a sensor that, at least partially, captures an actual action of a user. This element is infringed literally, or in the alternative, under the doctrine of equivalents.	
partially,	For example, the Launch Proconsists of infrared cameras ("sensor") that precisely measure every hit ("an actual action	

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ACCURACY ABOVE ALL

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before and this allows you to trust your swing when it matters most.

Source: https://www.bushnellgolf.com/products/launch-monitors/launch-pro/

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.

[1.2] hardware that couples the housing to at least one of the user. equipment used by the in user performance of the actual action of the user, or combination thereof; and

Company provides a housing, comprising hardware that couples the housing to at least one of the user, equipment used by the user in performance of the actual action of the user, or a combination thereof.

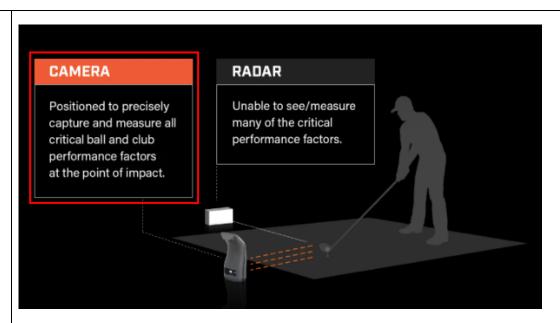
This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, the Launch Pro ("housing, comprising hardware") is used by the user to capture and track every shot played by the user. Therefore, upon information and belief, the housing is coupled to the equipment used by the user to play golf.



housing, comprising hardware

Source: https://www.bushnellgolf.com/support/product-plm-launch-pro (annotated)



Source: https://www.bushnellgolf.com/launch-monitors/

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.

[1.3] communication hardware that communicates the actual action of the user to the component set.

Company provides a housing, comprising: communication hardware that communicates the actual action of the user to the component set.

This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, the Launch Pro comprises a Wi-Fi or Ethernet communication interface ("communication hardware") to connect with other devices such as the PC such that it communicates the captured or sensed data related to golf shots ("the actual action of the user") to the PC ("the component set").

ELECTRONICS		
DISPLAY TYPE:	Standard Transflective LCD	
TOUCHSCREEN:	YES	
BATTERY LIFE:	5-7 Hours	
CHARGING PORT:	A/C Power Adapter	
NETWORK CONNECTIVITY	Wi-Fi or internet enabled PC	
PC CONNECTIVITY	Ethernet or USB-C Cable	
MOBILE DEVICE CONNECTIVITY	Wi-Fi	

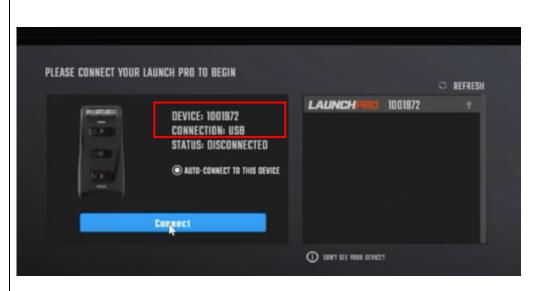
Source: https://www.bushnellgolf.com/products/launch-monitors/launch-pro/

The first time you power up your Launch Pro, you will be prompted to connect to the internet. There are four ways to connect:

WiFi (wireless network), Ethernet cable to a PC, the provided USB-C cable, or connecting to a mobile device using WiFi. The

preferred methods to connect are WiFi or Ethernet Network Cable.

Source: https://www.bushnellgolf.com/support/product-plm-launch-pro



Source: https://www.youtube.com/watch?v=MOXNM gA8xk, at 0:49

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.

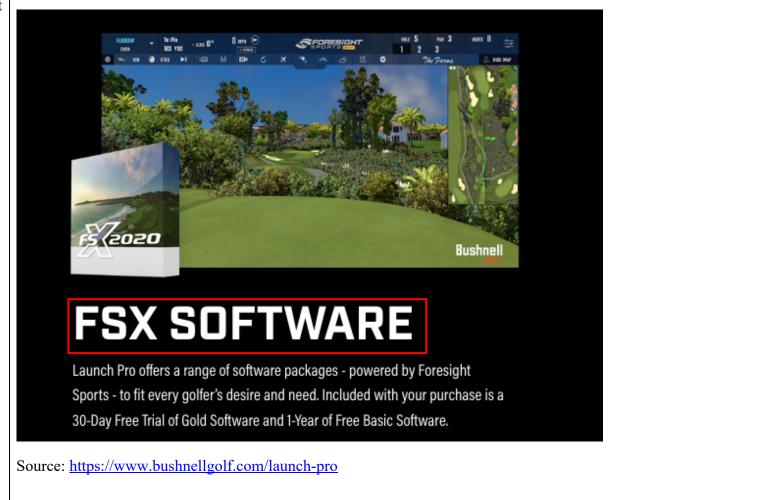
[1.4] the component set comprising: a comparison component that: compares the actual action of the user against a first standard action to

Company provides the component set comprising: a comparison component that: compares the actual action of the user against a first standard action to produce a first comparison result.

This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, the FSX software installed on the PC tracks the Ball launch data ("first standard action") such as Carry distance, ball speed, total spin, back spin, and side spin from the captured images shared by the Launch Pro and compares it with the next captured image to determine the difference ("first comparison result") when the shot is performed ("actual action of the user"). Therefore, it would be apparent to a person having ordinary skill in the art that the FSX software comprises a comparison component that compares the tracked shot ("the actual action of the user") against the Ball launch data.

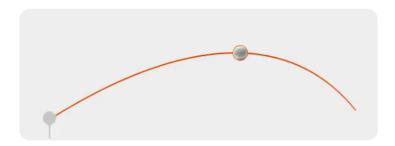
produce a first comparison result, and



BALL LAUNCH DATA

Ball launch data is measured by capturing images of the ball to model it in real time, and comparing it to the next captured image to determine exactly what the ball is doing post-impact. Here are the Launch Pro's key club and ball performance metrics we measure.

Source: https://www.bushnellgolf.com/launch-pro/what-we-measure#ball-data

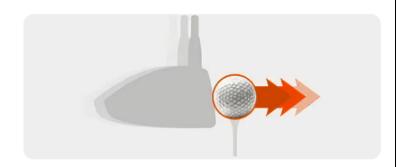


CARRY DISTANCE

The amount of distance the ball travels through the air.

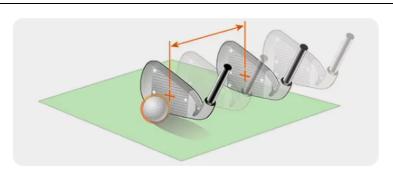
BALL SPEED

The measurement of the golf ball's velocity just after impact. Ball speed is the main component in generating distance.



Source: https://www.bushnellgolf.com/launch-pro/what-we-measure#ball-data

	Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.
[1.5] compares the actual action	Company provides the component set comprising: a comparison component that: compares the actual action of the user against a second standard action to produce a second comparison result.
of the user	This element is infringed literally, or in the alternative, under the doctrine of equivalents.
against a second standard action to produce a second comparison result;	For example, the FSX software tracks the Club data ("second standard action") such as club head speed, smash factor, club path, and angle of attack from the captured images shared by the Launch Pro. Therefore, upon information and belief, it compares the measured club data with the standard club data to determine the difference ("second comparison result") when the shot is performed ("actual action of the user"). Therefore, it would be apparent to a person having ordinary skill in the art that the FSX software comprises a comparison component that compares the tracked shot ("the actual action of the user") against the Club data.
	CLUB DATA
	The Launch Pro doesn't just look at the ball, but place one of the included markers to the face of your club to get accurate and consistent club data previously only attainable at much higher price points.
	Source: https://www.bushnellgolf.com/launch-pro/what-we-measure#ball-data

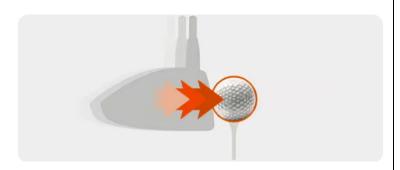


CLUB HEAD SPEED

The velocity at which the head travels, measured just prior to ball contact.

SMASH FACTOR

Smash Factor, also know as Efficiency, is the ratio between club head and golf ball velocities.



Source: https://www.bushnellgolf.com/launch-pro/what-we-measure#ball-data



CLUB PATH*

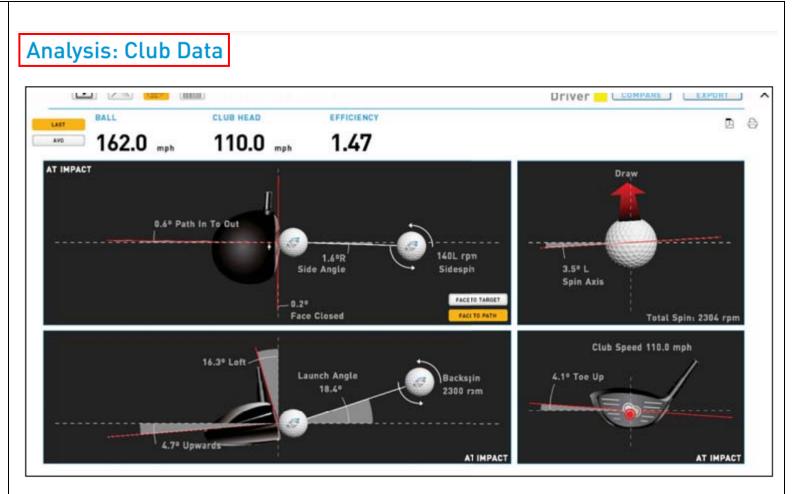
The swing path measured in a horizontal plane relative to the target line. This data point will tell you if the club was moving from inside-out, outside-in, or perfectly down the line.

ANGLE OF ATTACK*

The descending or ascending path of the club head, measured in degrees. A positive number is hitting up on the ball and a negative number is hitting down on the ball.



 $Source: \underline{https://www.bushnellgolf.com/launch-pro/what-we-measure\#ball-data}$



Source: https://support.foresightsports.com/sites/default/files/files/FSX UserManual v2-3 0908.pdf, Page 16

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.

[1.6] difference component that: makes identification of a deviation between the actual action of the user and the first standard action of the user through use of the first comparison result, and

Company provides a difference component that: makes an identification of a deviation between the actual action of the user and the first standard action of the user through use of the first comparison result.

This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, while the shot is performed ("the actual action of the user"), the FSX software tracks the ball launch data ("the first standard action") by capturing images of the ball and compares it to the next captured image to determine post impact of the ball ("deviation"). Therefore, it would be apparent to a person having ordinary skill in the art that the FSX software comprises a difference component that measures the deviation through using the difference ("the first comparison result") between multiple captured images in tracking the Ball launch data.

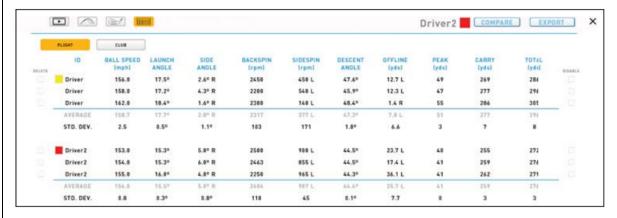
BALL LAUNCH DATA

Ball launch data is measured by capturing images of the ball to model it in real time, and comparing it to the next captured image to determine exactly what the ball is doing post-impact. Here are the Launch Pro's key club and ball performance metrics we measure.

Source: https://www.bushnellgolf.com/launch-pro/what-we-measure#ball-data

Analysis: Shot Table

The shot table displays all shots that have been taken during the current session. All shots are grouped by club. You can toggle between flight and club data at any time by selecting the corresponding option at the top left of the screen. You can view the video, flight, or club analysis screens from a previous shot by left-clicking on the corresponding line of data.



Source: https://support.foresightsports.com/sites/default/files/files/FSX_UserManual_v2-3_0908.pdf, Page 15

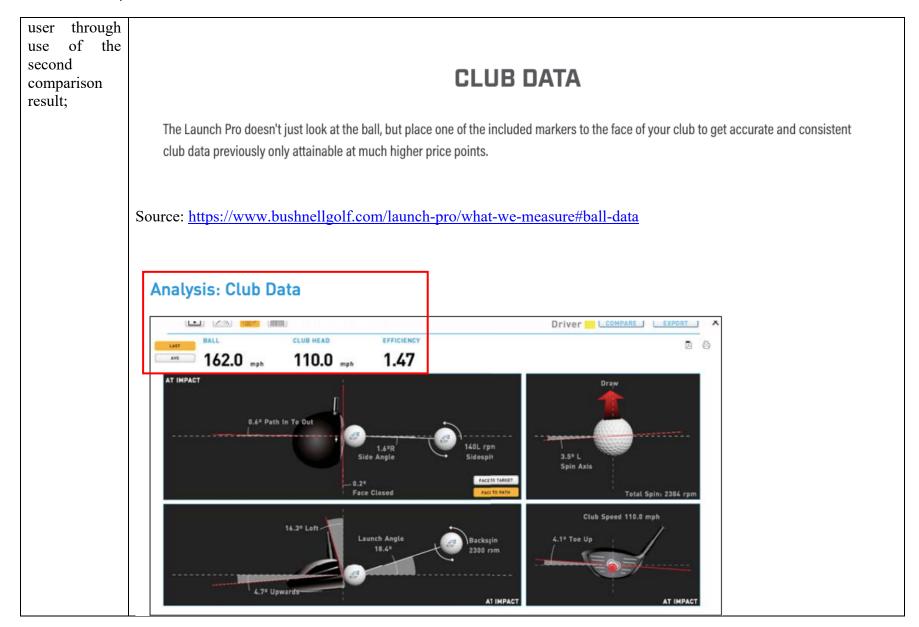
Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.

[1.7] makes an identification of a deviation between the actual action of the user and the second standard action of the

Company provides a difference component that: makes an identification of a deviation between the actual action of the user and the second standard action of the user through use of the second comparison result.

This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, upon information and belief, the FSX software comprises a difference component that measures the deviation by using the difference ("the second comparison result") between club data for multiple shots ("the actual action") and the standard club data ("the second standard action").



Source: https://support.foresightsports.com/sites/default/files/files/FSX UserManual v2-3 0908.pdf, Page 16

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.

[1.8] selection component that selects a selected standard action for the user based, at least in part, on a smaller deviation of the deviation between the actual action of the user and the first standard action and the deviation between the actual action of the user and the second standard action;

Company provides a selection component that selects a selected standard action for the user based, at least in part, on a smaller deviation of the deviation between the actual action of the user and the first standard action and the deviation between the actual action of the user and the second standard action.

This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, the FSX software measures both the ball launch data and the club data and allows the user to access the ball and the club data such that the user's game is improved. Therefore, upon information and belief, the software comprises a selection component that selects a selected standard action for the user in the form of a recommended strategy, based, at least in part, on a smaller deviation between the deviations calculated on the basis of the ball launch data and the club data.

BALL LAUNCH DATA

Ball launch data is measured by capturing images of the ball to model it in real time, and comparing it to the next captured image to determine exactly what the ball is doing post-impact. Here are the Launch Pro's key club and ball performance metrics we measure.

Source: https://www.bushnellgolf.com/launch-pro/what-we-measure#ball-data

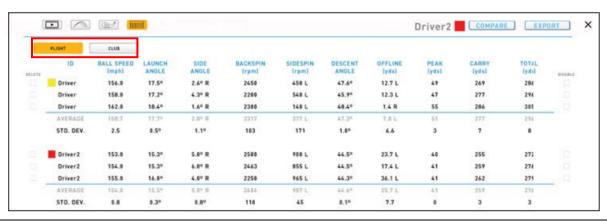
CLUB DATA

The Launch Pro doesn't just look at the ball, but place one of the included markers to the face of your club to get accurate and consistent club data previously only attainable at much higher price points.

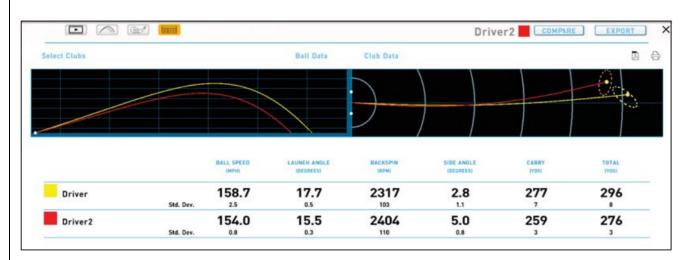
Source: https://www.bushnellgolf.com/launch-pro/what-we-measure#ball-data

Analysis: Shot Table

The shot table displays all shots that have been taken during the current session. All shots are grouped by club You can toggle between flight and club data at any time by selecting the corresponding option at the top left of the screen. You can view the video, flight, or club analysis screens from a previous shot by left-clicking on the corresponding line of data.



Source: Source: https://support.foresightsports.com/sites/default/files/files/FSX_UserManual_v2-3_0908.pdf, Page 15



You can compare multiple clubs in a session by selecting the **Compare** option at the top right of any of the analysis screens. Choose the clubs you wish to compare in the **Select Clubs** option at the top left of screen. You can compare up to 6 clubs at a time. You can toggle between ball and club data by selecting the corresponding option at the top of the screen. This page can be saved to PDF or printed by selecting the PDF or printer icons at the top right of the screen.

Source: https://support.foresightsports.com/sites/default/files/files/FSX_UserManual_v2-3_0908.pdf, Page 16

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Company.

[1.9] an instruction component that produces

Company provides an instruction component that produces an instruction to instruct the user to change from the actual action of the user to the selected standard action for the user and a communication component that causes disclosure of the instruction.

an instruction to instruct the user to change from the actual action of the user to the selected standard action for the user; and a communicatio n component that causes disclosure of the instruction.

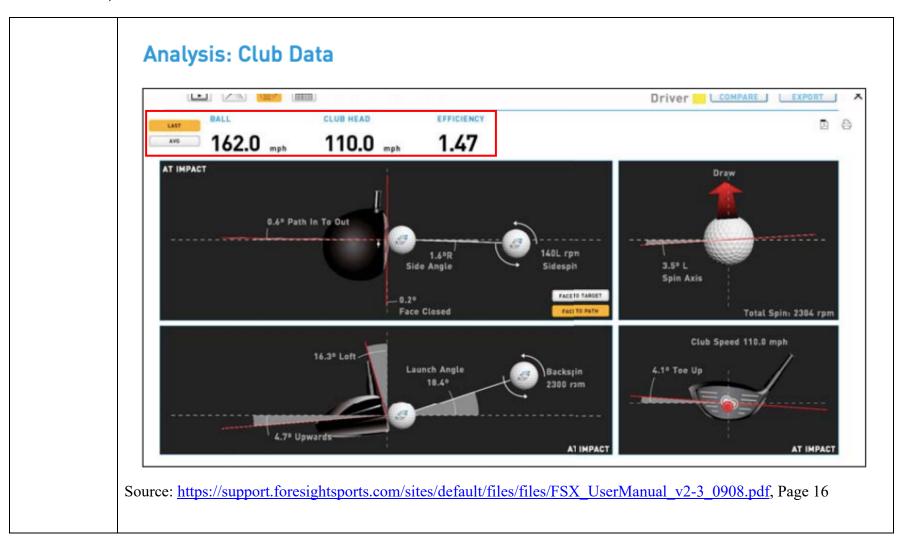
This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, the FSX software displays the current values and the average values in both the ball data and the club data metrics such that the user can access the different metrics after the game to utilize the metrics in improving the game. Therefore, upon information and belief, the metric reports available to the user in the software interface ("disclosure of the instruction") after the game act as an instruction component that produces an instruction to instruct the user to change from the actual action of the user to the selected standard action for the user.

Improve

Collect and analyze data for fitting and instruction, or practice your game on the driving range or golf course.

Source: https://support.foresightsports.com/sites/default/files/files/FSX UserManual v2-3 0908.pdf, Page 4





2. List of References

- 1. https://www.bushnellgolf.com/launch-pro, last accessed on 27 March, 2024.
- 2. https://www.bushnellgolf.com/support/product-plm-launch-pro, last accessed on 27 March, 2024.
- 3. https://www.bushnellgolf.com/launch-pro/what-we-measure, last accessed on 27 March, 2024.
- 4. https://www.bushnellgolf.com/launch-pro/what-we-measure#ball-data, last accessed on 27 March, 2024.
- 5. https://www.bushnellgolf.com/products/launch-monitors/launch-pro/, last accessed on 27 March, 2024.
- 6. https://www.bushnellgolf.com/content/product/Support/User-Manual-Launch-Pro-Launch%20Monitor-Model-501000.pdf, last accessed on 27 March, 2024.
- 7. https://www.bushnellgolf.com/lp-club-versus-ball-enabled#:~:text=Ball%20launch%20data%20is%20measured,ball%20performance%20metrics%20we%20measure, last accessed on 27 March, 2024.
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- 9. https://www.bushnellgolf.com/products/launch-monitors/launch-pro/, last accessed on 27 March, 2024.